

CALFED (CATEGORY III)**EXECUTIVE SUMMARY**

PROJECT TITLE: City of Redding Water Utility Fish Screen Rehabilitation

APPLICANT: City of Redding, Department of Public Works
760 Parkview Avenue, Redding, California 96049-6017

PROJECT DESCRIPTION AND LOCATION

The City of Redding is requesting funds to install a positive barrier fish screen structure on its intake structure at Pump Station #1 (City of Redding Water Utility, within the Sacramento River, Shasta County) which will meet National Marine Fisheries Service (NMFS) and California Department of Fish and Game (CDFG) screen criteria. Design, engineering, construction, installation, and monitoring of the new screens and any necessary modification of the present intake structure would take place.

The City of Redding Water Utility diverts water directly out of the Sacramento River at Pump Station #1 which is located on the south bank of the Sacramento River in the area referred to as Lake Redding, approximately 2.7 miles down river of Keswick Dam (River Mile 246.7R). The flows being taken in by the pumping plant average ± 37.2 cubic feet per second (CFS) with a maximum intake of 44.6 CFS. The pumping plant is utilized 365 days a year. Flows are dependent upon the immediate needs of the urban community, and fluctuate seasonally.

PRIMARY BIOLOGICAL/ECOLOGICAL OBJECTIVES:

The primary objective of the project is to increase protection for priority species of juvenile fish within this section of the Sacramento River. The protection added by the upgraded screening system on Pump Station #1 will reduce or eliminate entrainment losses of CALFED priority species including *winter-run*, *spring-run*, *Sacramento fall-run* and *Sacramento late-fall run chinook salmon*, *steelhead trout*, and other resident fish species. These actions will help in the recovery of State and federally listed fish species, improvement of the riverine and Bay Delta aquatic ecosystem, and improve important sport fisheries.

BUDGET COSTS AND THIRD PARTY IMPACTS:

The proposed budget of \$576,640 would fund the 3 year project. The City will provide cost sharing (\$80,740) in the form of its civil engineering personnel, who will oversee construction and inspect the construction of the project as well as complete management of the entire project from start to finish. CALFED funding would be used to design and purchase the needed materials to construct the screening system, and cover the cost of construction (\$495,400). There are no anticipated negative third party impacts resulting from this proposed project.

Location and/or Geographic Boundaries of the Project

City of Redding Water Utility Pump Station #1 is located on the south bank of the Sacramento River (River Mile 246.7R) within the area referred to as Lake Redding, approximately 2.7 miles downstream of Keswick Dam, within the City of Redding, Shasta County, California. The site corresponds to an unsectioned portion of Township 32 North, Range 5 West, of the "Redding, Calif." 7.5 minute U.S.G.S. topographic quadrangle (Figure 1 - *Project Site and Vicinity*).

ECOLOGICAL AND BIOLOGICAL BENEFITS

Ecological/Biological Objectives

The primary objective of the project is to increase protection for priority species of juvenile fish within this section of the Sacramento River. The protection added by the upgraded screening system on Pump Station #1 will reduce or eliminate entrainment losses of CALFED priority species including *winter-run, spring-run, Sacramento fall-run and Sacramento late-fall run chinook salmon, steelhead trout*, and other resident fish species. These actions will help in the overall goal for the recovery of at-risk native anadromous fish species.

The project would reduce mortality of priority fish species due to entrainment by installing modern screens which meet the required specifications set by NMFS and CDFG. Ecological and economic benefits are expected since the potential reduction of juvenile fish losses would help to promote recovery of populations of listed and non-listed fish species and help to increase the availability of fish to sport, commercial anglers, and the overall Sacramento River and Bay-Delta ecosystem. This project would provide other agencies or water intake facilities with a model for establishing proactive plans to increase long-term water diversion protection. It would also provide the CALFED Bay-Delta Program with a model project to help increase awareness and knowledge about water diversion screening projects.

Linkages

Funding for water diversion projects which have needed fish screening within the Sacramento Valley have received significant funding from both CALFED and the Anadromous Fish Screen Program of the Central Valley Project Improvement Act (CVPIA). Since 1997, CALFED has approved funding for some 14 projects, helping to design and/or install fish screens to help reduce or eliminate entrainment and loss of anadromous fish species throughout the Valley. Examples include Reclamation District 108 and 1004, the Princeton - Cordua - Glenn/Providence Irrigation District, and just down stream of the City of Redding's intake structure, the Anderson Cottonwood Irrigation District. Funding for these projects have allowed for the design and/or installation of positive barrier fish screens within their areas.

The objectives of this project are consistent with the *Ecosystem Restoration Program Plan*, ecological benefits as described in the *Visions for Ecosystem Elements (Priority Group 1)* (Volume I, pp. 32), *Species and Species Group Visions (Chinook salmon and Steelhead trout)* (Volume I, pp.